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ABSTRACT

Previous research has suggested that Rotter's concept of locus of control is significantly related to a variety of attitudes and behaviors. To study the effects of sex, race, and social class differences, a projective measure of locus of control was developed to explore the relationship between control orientation and career aspirations for 432 adolescents. The findings supported the multidimensional measurement of locus of control. When not forced to choose between internally or externally phrased options, blacks and lower class white females were more likely than whites and lower class white males to identify both external contingencies and internal factors in their perceptions of factors that affect outcomes. The results suggest further research is needed to explore the educational institutional effects on orientations to control. (Author/JAC)

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CONTROL AND ASPIRATIONS IN ADOLESCENTS: A COMPARISON BY RACE, SEX AND SOCIAL CLASS

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Control and Aspirations in Adolescents: A Comparison by Race, Sex, and Social Class[1]

Brinton Lykes, Abigail Stewart, & Marianne LaFrance

Research using Rotter's (1966) concept of locus of control has been extensive, suggesting that locus of control relates significantly to a variety of attitudes and behaviors. The concept may be particularly useful in understanding how adolescents, who are at a life stage in which they are seeking to clarify options and make decisions in the face of new experiences, construe their worlds. Where one locates control may have implications for present aspirations and future achievements. The present study looked at sex, race, and social class differences in control orientations and sought to clarify relations between control orientations and aspirations within different groups of adolescents.

Locus of control is usually conceived of as a unidimensional bipolar construct. Rotter's 23 item forced choice scale is the measure most commonly used to assess an individual's locus of control. As such internal and external control are regarded as opposite ends of a single dimension such that one's locus of control is measured by the number of external items endorsed. Despite considerable utility of Rotter's construct, the concept and its measurement have been criticized on a number of grounds. The present paper addresses itself to several of these criticisms and argues that locus of control is better conceived as multi- not unidimensional. Three control categories were identified: internal, external, and composite, suggesting that internal and external control may not be mutually

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1 Paper presented at the 52nd annual meeting of the Eastern Psychological Association, New York, N.Y., April, 1981.

exclusive types of control and that the concept may be more complex than previously considered. It is anticipated that this multidimensional conceptualization will add greater clarity with respect to previously found sex, race, and social class differences in control orientations. Finally, the measure developed in this study used a projective format, thereby attempting to deal with problems of response bias, reactivity, and social desirability usually attributed to the objective scale.

In sum, the present study looked at overall differences in orientations to control by examining between group differences. Secondly, intragroup differences in the pattern of relations between control and aspirations were hypothesized. For groups who experience real world career blockage and who are less sure of future employment such differences may reflect differential weighting of external contingencies or internal effort in the formation of aspirations.

Method

Samples studied[1]

The data were drawn from five data sets including 432 adolescents at public and private schools in the Midwest and Northeast. Although different in some respects all data sets provided comparable information on the variables selected for investigation. They included 64 Black males and 62 Black females who were high school students from lower and lower middle class families and 154 White males and 152 White females who were junior high and high school students (7th - 12th grades) from lower, middle, and upper class families.

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1 All five data sets are housed at the Henry A. Murray Research Center for the Study of Lives, Radcliffe College, Cambridge, Ma., 02138.

Although sample selection and data collection differed across data sets, all of the original investigators used both open ended questionnaires or interviews and projective tests in data collection. All five studies included Thematic Apperception Tests and questions concerning the student's career aspirations or plans for the future. These questions, the TAT-based stories, and demographic information provided on the questionnaires were coded for purposes of this secondary analysis.

A projective measure of locus of control

Based on Rotter's formulation of the construct of locus of control, and on previous work by Robert Dies (1968), a projective measure of perceived locus of control was developed. The three categories of control described below were conceived as independent measures of control rather than as points along a single dimension.

Scoring categories. The following mutually exclusive categories were developed:

> 1) Internal control is scored when positive and/or negative events are described as the consequences of the main character's own thoughts, feelings, or actions. The main character emphasizes his/her personal responsibility for problems described and engages in coping thoughts or activities.

In a story scored for internal control, a woman is described as working in a doctor's offece, a job "she found. She is thinking about filling up the appointment book and is worried about getting the statements out before 12:00. She will get the statements out and patients scheduled".

> 2) External control. When events are described as being independent of the main character's actions, thoughts, or feelings, and influenced by such factors as luck, chance, or fate, as under the control of powerful others, or as unpredictable because of the great complexity of forces surrounding him/her, stories are scored for external control.

An example of a story scored for external control described Sam as working on a project for his school science fair because "his science teacher is making all the kids do it...the teacher said if you don't do one you will fail the class".

> 3) Composite control is scored when the main character includes descriptions of the presence of external factors over which she/he has little direction and describes events as the result of his/her own actions, thoughts, or feelings.

A story scored for composite control described Frank's return to school after a "long sickness which led to his staying back a year". Frank "feels uneasy", yet "struggles both within himself and with others trying to hold on to his identity knowing he's no less a person because of his staying behind. His struggle will be futile though because of his taunting and unaccepting peers".

The manual[1] describes fundamental scoring issues concerning the identification of the main character and general scoring procedures, and includes four sets of practice scoring stories. Category reliability between the two original scorers exceeded .85 on the final two sets of stories. A third coder was trained using the manual and achieved a reliability with the expert scorer of .91.

Scoring the stories. All students received several verbal or picture TAT cues. All cues were administered under standard conditions with standard guideline questions (Atkinson, 1958). Each story of the entire sample of 432 adolescents was scored. Reliability between the two scorers ranged from .72 to .86 across all data sets, averaging .80.

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1 A copy of the coding manual, Scoring Manual for Orientations to Control, is available from the first author at Boston College, Psychology Department, Chestnut Hill, Ma. 02167.

Stories were coded for presence (1) or absence (0) of each of internal, external, and composite control. The sum for each of the three categories was taken across the first four cues. Each subject therefore recieved three scores ranging from 0 - 4 and representing a measure of the subject's orientation to internal, external, or composite control.

Career aspirations and demographic variables

Career aspirations, coded from responses to questions about students' plans for the future, were scored as high (3), medium (2), or low (1) in terms of the education or training beyond high school required for the occupation aspired to by the respondent. Race and sex were coded from student questionnaires; Hollingshead's Index of Social Position was used to classify the student's socioeconomic status by coding parents' occupations into 1 of 7 categories which were then regrouped into upper (3), middle (2), or lower (1) social classes.

Evidence for the validation of the scoring system for locus of control

Prior to assessing the relationships between control and aspirations let us briefly describe evidence we have which suggests that this projective measure is tapping a construct similar to that tapped by Rotter's I-E scale. Data from a smaller sample of 62 college students who received both the Rotter I-E scale and TAT picture cues was analyzed to examine the relationship between these two measures. For this college sample, internal control correlated significantly and negatively with Rotter's scale ($r=-.27$, $p \leq .05$) whereas composite control correlated significantly and positively with Rotter's scale ($r=.45$, $p \leq .001$). However, external control and Rotter's measure were not significantly correlated ($r=-.09$, n.s.).

These findings provide evidence in support of the validity of this projective measure. They suggest that Rotter's measure of internality may be assessing an orientation in which subjects are unaware of external control. Findings using our measure suggest that those scoring more external on Rotter's scale may actually perceive control as composite, indicating an awareness of both external forces and of their own involvement in effecting outcomes, while those scoring internal on Rotter's scale may lack an understanding of the power of external forces.

Results

Findings related to the effects of sex, race, and social class on locus of control provide support for a multidimensional scoring of control. In addition, correlational analyses support our argument that the relationship between orientations to control and career aspirations is not simple but one which varies for different groups depending on social standing.

Effects of race, sex, and social class

As indicated in Tables 1 and 2 we examined main effects of sex, race, and social class within certain groups; that is, we examined the effects of sex and class, controlling for race, and the effects of race and sex, controlling for class. In examining Table 1 we see that middle and upper class White adolescents were significantly more internal in their orientations to control than lower class White adolescents ($F(2,300)=4.94$, $p \leq .01$). The tendency in both sets of analyses (see Tables 1 and 2) for males to be slightly more internal than females ($F(1,300)=3.00$, $p=.07$; $F(1,252)=3.17$, $p=.08$) is in line with previous work. Note also that all groups except

Black females score higher on internal control than on the other control orientations.

Adolescents grouped by race or sex did not differ from each other in orientations to external control. Although there was no main effect for social class there was a significant interaction between sex and social class such that upper class females and lower class males expressed a significantly more external orientation to control than other groups ($F(2,300)=5.01$, $p \leq .01$).

The present coding system provides additional information about group differences. Although Blacks and Whites do not differ significantly on either internal or external control these groups are significantly different in orientation to composite control. More specifically, while controlling for social class, Blacks and females were significantly more likely to construe control as composite than either Whites or males, respectively ($F(1,252)=7.85$, $p \leq .01$; $F(1,252)=6.12$, $p \leq .05$). Further, there is a tendency for Black females to be more composite in their orientation to control than any other group ($F(1,252)=3.36$, $p=.07$).

Correlations between control and aspirations

In initial correlational analyses examining the relations between control orientations and aspiration level with White subjects within different social class groups no differences were found so these groups were collapsed. In examining Table 3 we see that internal control was not significantly related to aspiration level for any group. Further, for White males and females, there were no significant relationships between any of the control variables and aspirations. In contrast, for Black females, external control was significantly

related to higher aspirations (r=.35, $p \leq$.05), whereas for Black males composite control was significantly related to higher aspirations (r=.43, $p \leq$.05). Further, comparisons of correlations coefficents indicate that compostie control tends to relate to higher aspirations differently for Black males and White females such that this relationship is positive for Black males and negative for White females (p=.10).

Discussion

The findings support the multidimensional measurement of locus of control using a projective format. In particular, Black and White lower class adolescents were found to exhibit equivalent orientations to internal and external control but to differ in their orientations to composite control. Specifically, Blacks expressed more orientations to composite control. Such differences suggest that when not forced to choose between internally or externally phrased options (as in Rotter's scale) Blacks are more likely than Whites to identify both external contingencies and intrinsic factors (that is, themselves) in their perceptions of what affects outcomes. Such orientations may reflect an accurate perception of real constraints Blacks as a group experience in society (Social indicators of equality for minorities and women, 1978).

Male and female lower class adolescents exhibited similar orientations to external control but showed a tendency to differ in orientations to internal control, with males exhibiting slightly more internal control. Further, the female adolescents were more likely than their male peers to construe control as composite. The existence of composite control allows us to speculate that Blacks and females may be both more aware of external presses and of the need for

assuming some personal control. The construct of composite control may then reflect a complex description of what one has to do (internal), given external contingencies (external).

Most previous research on orientations to control has concluded that people are handicapped by external locus of control orientations and has fostered a belief that it is desirable to change people, especially those who are not doing well in our society, in the direction of internality. However, the present findings suggest that for Black and female adolescents perceptions of control are in terms of both external contingencies and internal factors. Moreover, internal control does not predict high aspirations for any group. In fact, those Black females who are aware of external contingencies, that is, those who may have a realistic assessment of their life situations, are those with higher aspirations. Finally, internal control coupled with an awareness of external contingencies (composite control) is related to high aspirations in Black males. Thus, our data suggest that orientations to control which are not internal may be functional for different groups under different circumstances.

In this study we have considered the effects of rather gross social categories on orientations to control. The immediate social context surrounding adolescents may represent a more proximate influence on their social experiences and further affect their orientations to control. As this sample includes students attending a range of public and private schools, in further research we plan to examine the institutional effects on orientations to control. Such research would provide additional data for understanding the force of past and present life experiences in shaping future expectancies.

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Table 1

Mean Scores for Control Orientation By Class and Sex of White Subjects

	Social Class Groups						Two-way F Ratios		
	Lower		Middle		Upper				
Score	Males	Females	Males	Females	Males	Females	Sex	Class	Sex X Class
N	49	35	43	51	62	66			
Internal Control									
M	.31	.29	.44	.36	.40	.36	3.00^{t}	4.94**	<1
SD	.25	.24	.26	.26	.25	.20			
Composite Control									
M	.25	.26	.21	.26	.26	.27	<1	<1	<1
SD	.24	.26	.22	.24	.22	.22			
External Control									
M	.28	.21	.21	.23	.18	.32	1.11	<1	5.01**
SD	.26	.20	.19	.24	.19	.25			

Degrees of freedom for F ratios were 1,300 and 2,300 respectively; scores represent mean scores and range from 0 to 1.

t $p \leq .10$

** $p \leq .01$

Table 2

Mean Scores for Control Orientation by Race and Sex of Subject Within the Lower Class[1]

Score		Blacks		Whites		Two-way F Ratios		
	N	Males 64	Females 63	Males 66	Females 62	Sex	Race	Sex X Race
Internal Control								
M		.40	.31	.33	.31	3.17^{t}	1.18	1.69
SD		.24	.24	.25	.26			
Composite Control								
M		.27	.41	.24	.26	6.12*	7.85**	3.36^{t}
SD		.26	.27	.24	.25			
External Control								
M		.29	.27	.28	.21	2.47	1.56	<1
SD		.23	.23	.24	.22			

Degrees of freedom for F ratios are 1,252; scores represent mean scores and range from 0 to 1.

t $p \leq .10$
* $p \leq .05$
** $p \leq .01$

[1] Across race comparisons within the lower class include the entire Black sample and White subjects with a score from 4 (clerical and sales) through 7 (unskilled) on Hollingshead's Index of Social Position.

Table 3

Correlations Between Control Orientations and Aspirations Within Race and Sex Groups

Score		Whites		Blacks	
		Males	Females	Males	Females
	N[1]	126	135	24	41
Internal Control		-.02	.04	-.28	-.17
Composite Control		.11	-.03[a]	.43*[a]	-.13
External Control		.13	.01	-.24	.35*

* $p \leq .05$

a This value tends to be different ($p \leq .10$) from the other similarly marked value in this row.

[1] These Ns represent the total number of subjects in each group for whom control orientations and aspirations were codable.